

NATURAL RESOURCES CONSERVATION SERVICE

CONSTRUCTION SPECIFICATIONS

FENCE – WOODEN BOARD

(Ft.)

CODE 382

VI. Wooden Board**(Also refer to Fence drawings)****A. Board Spacing**

The top of the top board shall be at least 42 inches above ground level and 2 inches below the top of posts on wood posts. Install a minimum, of 3 horizontal boards or rails. Space the boards 12" to 14" apart on center.

Place horizontal boards on the side of posts having livestock. If boards are on the side away from livestock, install one or more barbed or electric wires at nose height of the animal being controlled.

Stagger rail joints so they don't hit the same on every post. For example for a three plank fence, posts would alternately have two or one joint. For a four plank fence, every post would have two joints.

Install a vertical face board to cover joints on every post and two on corners.

B. Type of Board

The horizontal boards shall be a minimum of 1" x 5" and 12' long. Lumber shall be treated with

creosote or comparable preservative. Treatment will meet the American Wood Preservers' Association (AWPA) U1-06/UC3B standard. If painting is desired, lumber shall be treated with an anti-fungal agent or a waterborne preservative such as acid copper chromate, not creosote.

C. Pull Assemblies

Pull assemblies are not required unless more than two wires are pulled in addition to board fence. If more than two wires are pulled see bracing for that type of wire.

D. Post Spacing, Length, and Depth

Space posts 6 to 8 feet apart to accommodate selected rail length. Rail length may range between 12 and 16 feet.

Wood posts must have a minimum length of 6 feet and set or driven to a minimum depth of 24 inches. When posts are set, earthfill placed back around posts shall be thoroughly tamped. Wooden line posts shall have a 3-inch top commercial size.

Post spacing in areas shallow to rock may vary based on availability of post sites. Probe ground with a rock probe to determine desirable post sites. Rock bits are available in some areas for drilling rock. Posts set 5

gallon buckets of concrete, may be used as a line post. Bury buckets as deep as possible. Use live trees as post only where soils are shallow, see section F.

E. Line Posts

All wooden posts (except Red Cedar, Osage Orange, or Black Locust) shall be treated according to use category UC4A of the AWP, U1-06 (See Below Table):

Table 1: Minimum treatment rate for selected preservatives

<u>Use Category</u> 3	<u>Minimum Retention Rate (pcf)</u>			
	<u>CCA</u>	<u>ACQ*</u>	<u>CBA-A</u>	<u>CA-B</u>
<u>UC3*</u>	<u>0.25</u>	<u>0.25</u>	<u>0.20</u>	<u>0.10</u>
<u>UC4A*</u>	<u>0.4</u>	<u>0.4</u>	<u>0.41</u>	<u>0.21</u>

*UC3 refers to exterior construction, above ground, uncoated or poor water run-off. UC4A refers to Ground Contact or fresh water, non-critical components.

At least half the diameter of red cedar shall be heartwood. Quality of treated wood shall provide sufficient strength and last for the expected life of the fence.* If ACQ preservative is used, then do not allow aluminum wires or staples to be used with this treated wood. Use only galvanized metals.

F. Live Trees as Line, Bracing, and Corner Posts

Only use live trees in areas where soils are shallow. Live trees used for corner, bracing, and line posts shall

have a diameter breast height (DBH) equal to or greater than those prescribed for normal wooden posts.

Some alignment variation shall be allowed, but caution should be taken to minimize offsets.

Wire or insulators will not be fastened directly to trees. When using live trees, protection will be provided between the tree and wire or insulators (UC3 treated 2 x 4's, fiberglass, or rigid plastic strip).

G. Corner, Gate, or End Assembly

Bracing is not required for board fence; however, if wire run in addition to boards follow applicable standard for wire. Brace posts that are used for hanging gates.

H. Bracing

Bracing is not required for board fence; however if wire is run in addition to boards follow applicable specifications for wire. Brace posts that are used for hanging gates.

The brace member shall be the equivalent of a 4" top diameter post or standard weight galvanized steel pipe of 2" diameter installed at least 3 feet above ground, or between the top two wires, whichever is higher. Place brace at least 8 inches below the top of post. The brace member shall be at least 6 feet long or 2.5 times the height of the top wire (i.e., 42 inches x 2.5 = 105 inches or 8.75 feet).

The brace wire shall be number 9 gauge smooth wire or 12-1/2-gauge high tensile strength smooth wire.

Twist sticks or inline strainers will be used to tighten brace wire.

I. Fasteners

Attach each rail or horizontal board with two 16d galvanized or equivalent treated nails or screws. On each post install a face board with one nail in each horizontal plank. So for a 3 rail fence, two nails or screws would be in each horizontal rail and six nails or screws would be in the face board for a total of 18 nails or screws per post.